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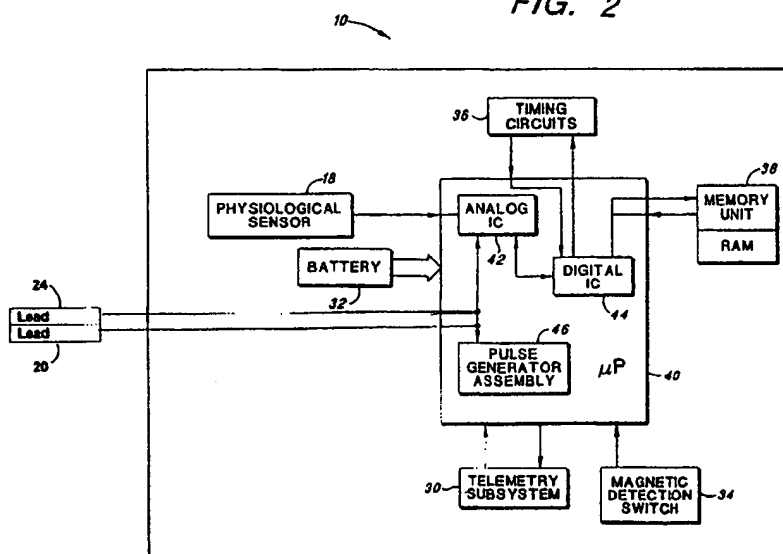
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**(54) An implantable cardiac stimulation device**

(57) A system and method for discriminating a fusion beat from an evoked response during the autocapture/autothreshold routines of an implantable stimulation device is provided. The presently disclosed system and method reliably verifies capture in an implantable stimulation device by accurately discriminating a fusion beat from an evoked response based on an analysis and comparison of the morphology, amplitude, polarity, pat-

tern and/or timing intervals of resulting T-waves. The disclosed system for discriminating a fusion beat includes a pulse generator; a means for sensing voltage signals evidencing depolarization and repolarization of cardiac tissue; and a microprocessor based means for determining, based on an analysis of the subsequent T-waves, whether a voltage signal that occurs during the capture detection window is a depolarization voltage signal, which evidences capture, or a fusion beat.

FIG. 2





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# PARTIAL EUROPEAN SEARCH REPORT

Application Number

which under Rule 45 of the European Patent Convention EP 00 30 0536 shall be considered, for the purposes of subsequent proceedings, as the European search report

| DOCUMENTS CONSIDERED TO BE RELEVANT   |   |                                  |  |
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|   |   |                                  | A61N   |
| <b>INCOMPLETE SEARCH</b><br>The Search Division considers that the present application, or one or more of its claims, does/do not comply with the EPC to such an extent that a meaningful search into the state of the art cannot be carried out, or can only be carried out partially, for these claims.<br>Claims searched completely :<br>1-6<br>Claims searched incompletely :<br><br>Claims not searched :<br>7-9<br>Reason for the limitation of the search:<br><b>Article 52 (4) EPC - Method for treatment of the human or animal body by therapy</b> |   |                                  |  |
| Place of search   |   | Date of completion of the search | Examiner                                     |
| THE HAGUE   |   | 10 July 2001                     | Allen, E                                     |
| CATEGORY OF CITED DOCUMENTS<br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document<br>T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>& : member of the same patent family, corresponding document                        |   |                                  |  |

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on. The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

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